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The author discusses 21 criteria for improving and maintaining standards of excellence in higher education and identifies the research from which the criteria were derived.

The literature from which the 21 standards of quality were distilled are presented under seven topics: (1) "acquiry," (2) "inquiry," (3) learning and teaching theory and practices, (4) characteristics of students, (5) characteristics of institutions, (6) baccalaureate origins, and (7) study abroad.

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NEW DIMENSIONS in Higher Education

Number 12

What Standards Do We Raise?

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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Highlights

Much has been said about improving and maintaining standards of excellence in higher education, but little has been said in defining what these standards are. This publication offers the following 21 criteria as indications of institutional excellence and identifies the research from which they were derived:

1. Teaching and learning that exploit what is known about *acquiry* (acquisition) and *inquiry* (examination) of information.
2. Provision and utilization of adequate learning resources.
3. A minimum of remedial instruction, to avoid diluting college-level work.
4. Extensive reading by students, especially on their own initiative.
5. Consistent and purposeful out-of-class study.
6. Successful use of independent study or the inquiry approach to learning.
7. Common or core curriculums as bases for common understandings.
8. Discriminating scholarship, reflected in introductory courses clearly above high school work.
9. High but attainable aspirations.
10. Evidence of development of critical faculties of students.
11. Enhancement of creativity from freshman to senior year.
12. Significant impact on student attitudes and values.
13. A purposeful climate of learning, deliberately permissive and flexible.
14. Willingness to experiment and evaluate progress.
15. Atmosphere of academic freedom, with independence of thought and expression.
16. Staff recognition and rewards commensurate with service.
17. Quality of teaching that attracts others to the profession.
18. Tendency of students to continue study in graduate school.
19. Opportunities for study abroad which are carefully implemented.
20. Institutional research on important as well as urgent matters.
21. A counseling program which affects not just students but the institution as well.

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NEW DIMENSIONS in Higher Education

Number 12

What Standards Do We Raise?

by

Winslow R. Hatch, *Director*
Clearinghouse of Studies on Higher Education
Division of Higher Education

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
ANTHONY J. CELEBREZZE, *Secretary*

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New Dimensions in Higher Education

Winslow R. Hatch, *Coordinator of the Series* and *Director*,
Clearinghouse of Studies on Higher Education

THE SERIES *New Dimensions in Higher Education* deals with developments of significance to colleges and universities and all persons interested in improving the quality of higher education. These developments are examined one at a time but in the context of a series. Each number is intended, within the bounds of reasonable brevity, to provide the hurried reader with a summary and interpretation of a substantial body of information. To the extent feasible, detailed studies are cited, needed additional research is identified, and recommendations are suggested. Background materials include reports on file in the Office of Education's Clearinghouse of Studies on Higher Education, published literature in the field, and the counsel of educators who are recognized authorities in the subjects treated. In order that the series may be increasingly useful to colleges and universities, reader reactions are welcomed.

A detailed listing of previous numbers of the series appears inside the back cover.

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FOREWORD

EXCELLENCE or quality in education has received and is receiving much attention. It lies very close to the national interest; so it is not surprising that the U.S. Office of Education should be identified with this effort. A substantial contribution has been made by the Office in its New Dimensions in Higher Education series. While only one of the first 11 studies had quality in its title (No. 7, *Quest for Quality*), all were concerned with developments that enhance it. Two subsequent numbers, already in manuscript, stress the examination of certain critical aspects of quality. One describes ways in which undergraduate colleges have improved their programs. The other pinpoints the essence of the problem: How does one improve learning and teaching?

This study examines what seem to be critical problems: What, specifically, are the criteria of quality? What, explicitly, do we propose to improve? How does one best bring about this improvement? How does one best serve those who would like to act but do not know how or to what purpose?

In this regard, the Office can be helpful. In its Clearinghouse of Studies on Higher Education is a wealth of studies whose import for the problems before us can be examined quickly and judiciously.

The early drafts of this manuscript were in considerable demand, for the subject was timely and discussion of it so needed. They were even used as background material for several conferences. The final manuscript has benefited, in that such audiences helped to shape it. We trust that readers will continue to shape the study by volunteering data, by pointing out shortcomings, and by suggesting future action.

Editorial assistance in the preparation of the final manuscript was provided by Alice L. Richards of the Office of Education staff.

R. ORIN CORNETT
Acting Assistant Commissioner
for Higher Education

HAROLD A. HASWELL, *Director*
Higher Education Programs Branch

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I. The Problem of Standards

IN PONDERING the problems of quality one needs to know what research and experimentation have been done. In examining this research one should weigh each bit of evidence and fit it into a composite whole, a whole that reflects the emerging shape of higher education. This is what the New Dimensions series has attempted to do. This publication reflects the perspective of the series and hopefully builds upon it. When one studies the problems of quality in this way, he discovers that the attack upon quality has been slowed because first things simply have not always been put first. These first things appear to be: (1) The desirability of defining quality as explicitly as possible and of developing a priority of importance and of need with regard to these elements: and (2) the need to act in accordance with these priorities.

In support of such a program, the need is for *information* and for *discipline*.

No attempt is made here to be complete or definitive. Rather, wherever possible, the procedure is to refer the reader to recent reviews and to suggest the kinds of information that are available. To do otherwise would be to lose the reader in detail and to distract him from the business at hand, namely, the examination of a thesis. The word "information" is deliberately used in this statement because not all of the supporting data are evidence in the sense that they are derived from research. Some of the information is itself experiential rather than experimental in origin.

Similarly, the standards derived from this information do not represent all that might be adduced. They are but *some* of the standards and are limited to those applicable to undergraduate colleges and to those that can be distilled out of the literature identified in a later section.[1] It should also be emphasized that these standards are thought of as hypotheses. It is hoped that they may become *working* hypotheses—hypotheses based on a substantial body of information. Finally, these standards should not be thought of as constituting formulas that supply neat or pat answers, either singly or in the aggregate.

[1] See section III.

A surprising thing about the standards—at least surprising to the author—is that they are apparently as applicable to one institution as to another, and to one student as to another, provided, of course, that the concern of the institution or of the student is for higher education. When the hopes of institutions and individuals can be fulfilled by common purposes, the institution, the individual, and the general welfare are happily joined. When common aspirations supplant individual accommodations, the problem also becomes more manageable.

Several publics have shown an interest in these standards: prospective college students and their parents: high school teachers and counselors: college teachers and administrators: State, regional, and national associations and agencies: legislators: alumni: and donors. Even the general public can be presumed to be interested. There is a growing appreciation that the quality of higher education lies close to the public welfare. On the one hand, there is a wealth of information about higher education: on the other, a growing number of questions are being asked about what constitutes quality. However, when it comes to finding specific information to answer these questions, what passes as proper concern for excellence in one institution might be considered only a pursuit of mediocrity in another with higher basic standards.

Although no "neat" answers are supplied in this publication, and complete answers are not attempted, any reader interested enough to study the reports to which references are made will find that more data exist and are available than he may have realized, and that much of its goes to the heart of the problem, to the real issues. By making his own inquiries, the reader can get considerable data on the schools in which he is particularly interested. While collective efforts may be necessary to get some of the information required, this poses no insurmountable problem to those who want it badly enough to organize their pursuit. The standards suggested here, while applicable to "high productivity"[2] institutions, are perhaps even more useful and relevant in relation to the quality of offerings at the less productive ones.

Finally, it should be observed that there is nothing about the approach of this study that loads the analysis in favor of colleges with selected student bodies. The less selective institution can be as effective as the selective one, for example, if it will stop "telling" its students and improve its "teaching" and the student's learning. Actually, the less selective the college is, the more the institution needs to

[2] See "Baccalaureate Origins" references, section III.

do this. The same would appear to be true of the rest of the standards. As a matter of fact, the more an institution has been underrated, the more it should find these standards attractive, because they introduce a corrective factor. In sum, they help poor but deserving institutions improve their relative position.

The measure of what a college does for its students is reflected not so much in what it does for its best students as in what it does for the whole range of students, from good to poor. Brilliant students often seem to make their mark in college and in the world in spite of their training. This is much less true of poorer students, or of good but poorly trained students. Disadvantaged students are the supreme challenge, and an institution that succeeds here has proved its case. Accordingly, colleges should know, and prospective students should know, what institutions are able to do not just for part but for *all* of their students.

Although few of the standards are new—many are quite old—it is hoped that they may have a new impact. The interest of prospective students and of their parents, counselors, and high school teachers in the quality of collegiate programs seems to be greater than it has been for some time. Legislators are showing a new concern for the quality of the colleges they support and sponsor. The same is true for donors, labor, industry, and the general public—and for the best of reasons. Society's demands are also greater and the world situation is more critical. Combined with the new emphasis on the need for higher education, enough self-interest would appear to be involved on the part of students, teachers, parents, the general public, and Government to encourage the hope that attention may at last be given bona fide standards of quality and that these standards may have an appeal that is general enough to sustain the present quality drive. Quality, undefined or ill-defined, can result in raising a whole set of false standards and in diverting both our attention and our support to them.

II. Standards of Quality

THERE HAS BEEN much talk about standards and about raising standards in American schools and colleges. Much less attention has been given to the problem of *what* these standards are. Louis Benezet asks whether excellence is necessarily manifested in "a high College Board aptitude score, a pattern of so many courses in prescribed subjects, an experience in a private school that specialized in this preparation, and admission by one of some twenty-five 'prestige' colleges? . . . If that impression is making headway—and I believe it is—then we have a long way to go in our search for . . . Excellence. . . ." [1]

There are some other questions that also need asking. How helpful or responsible is it—

1. To endorse greater rigor in the selection of prospective teachers without suggesting what is meant by rigor or quality?
2. To endorse guidance without indicating what constitutes good counseling?
3. To recommend greater clarity and specificity with regard to institutional and program objectives without indicating what some of these specific objectives are?
4. To suggest that these objectives, still quite unidentified, constitute a desirable rationale for a school's admissions, curriculum, and evaluation practices?
5. To urge upon a college the desirability of determining what it considers to be the qualities desired in teachers and, hence, the qualifications of teachers without suggesting what at least some of these qualities and qualifications are?
6. To recommend an examination of the kinds and levels of tasks required of teachers without suggesting what they should be?
7. To continue to talk primarily about the need for more teachers when the likelihood is that the problem cannot be solved without improving the ways in which teachers are used?
8. To urge that able students be selected without defining what is meant by an "able student" and without indicating how the selection will be made?

The questions above are suggested by those attending numerous meetings of national committees dealing with faculty personnel problems and policies. Since less learned and less educationally sophisti-

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[1] Louis T. Benezet, "The Trouble with Excellence," *Saturday Review, Education Supplement*, Oct. 21, 1961.

cated persons than college administrators and teachers are likely to insist on greater quality in education without defining it, would it not be in the interest of those who can define it to do so?

What are the standards by which good teachers, good students, and, hence, good colleges can judge? Discussed here are 21 standards of quality derived from an examination of materials on file in the Clearinghouse of Studies on Higher Education and, more specifically, from the literature described in section III.

Standard 1

Quality may be indicated by a college's disposition to make a distinction between the acquisition (acquiry) and the examination (inquiry) of information. It is manifested in its success in getting students to accept a larger role in "acquiry" and in getting its faculty to make their teaching a joint "inquiry."

There is much evidence, both old and new, for the conclusion that when it comes to the acquisition of information students can do this better without the personal intercession of a teacher. The evidence in support of this statement is described later in this report and the implications of this research for teachers are clear. But how, practically, is a student, a counselor, or a parent to determine which colleges understand these problems and are doing something about them? The institutions will be those that:

a. Give the fewest expository lectures. This does not mean that they will eschew lectures; they simply will avoid as much exposition as possible in favor of more effective techniques. The number of students involved may actually be large, but the approach will feature Socratic, case, or problem-oriented presentations.

b. Provide laboratory instruction which is experimental or problem-oriented.

c. Provide for group conferences, seminars, colloquia, and the like, of a quality and number that fully exploit the human resources of the institution.

d. Provide examinations that are appropriate in that they minimize rote memorization and maximize critical thinking.

The condition of learning met in *a* and *b* above is that learning will increase to the extent that students are able to determine, frequently and in detail, just how well they are doing.

The principle of learning involved in *c* is that "*active* learning is more efficient than *passive* learning. . . . Discussion . . . may help develop critical thinking because students do the thinking and there is an opportunity to check their thinking against others. . . . The

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most commonly used discussion method is probably developmental discussion . . . directed to a definite goal such as solution of a problem. . . . Problem solving is improved when the discussion leader takes the problem in steps. . . . This . . . not only gives the discussion more focus but also helps students become aware of their progress." [2]

The applicable condition of learning in *d* is that "if we base our grades on memorization of details, students will memorize the text. . . . To develop an interest in thinking we have to make it satisfying. . . . Experience in solving problems within the student's ken is essential." [3]

Standard 2

Quality may be indicated in colleges that provide adequate learning resources materials and with students that use them.

Theoretically, these purposes are served by the library, but in many instances the library is a repository of books only. It is often an adjunct to rather than an integral part of the learning process. Institutions which are reexamining their "informing" function are beginning to assemble learning resources centers or libraries adequate to the requirements of today's students. These repositories include taped and televised lectures, programed learning materials, and pictures—still or moving. Were these centers or libraries organized as Land [4] suggests, and were they given the educational setting described by Brumbaugh in his prospectus for the new university at Boca Raton,[5] students should be able to acquire more facts on their own initiative than their professors could cram into their lectures. When such provisions are made for the "informing" of students, a faculty can reexamine its role and determine how many classes need to be "taught." In general, the more a student informs himself, the less his instructor has to do the informing. The instructor can, accordingly, "teach" to a degree and with an intensity not otherwise possible.

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[2] Wilbert J. McKeachie, "Recitation and Discussion," a paper published in *Achieve Learning Objectives* (a report of the Summer Institute on Effective Teaching for Young Engineering Teachers, Aug. 28–Sept. 9, 1960). University Park, Pa.: The Pennsylvania State University, 1960, p. F–6, 7, 27, and 31.

[3] Ibid., p. F–3 and 7.

[4] Edwin H. Land, *Generation of Greatness—The Idea of a University in the Age of Science—The Ninth Annual Arthur Dehon Little Memorial Lecture.* Cambridge, Mass.: Massachusetts Institute of Technology, May 22, 1957.

[5] "Report of the Planning Commission for a New University at Boca Raton," Board of Control of the State Board of Education, Tallahassee, Fla., 1961, 38 p. (Processed).

Standard 3

Quality may be indicated in colleges that provide the least remedial instruction.

The point here is that the more remedial work a student takes the less higher education he gets during a given span of time. The more remedial work given, the less time the faculty has for college-level instruction.

Institutions alert to this problem are trying to introduce correctives. Greater selectivity is being shown but, as Benezet points out, the criteria employed may not be very good. A beginning has been made in providing "programed instruction" in lieu of "remedial" instruction so that greater readiness can be insisted upon. Institutions for whom remedial instruction is an acute problem may have found in programed learning the instrument that will permit them to enhance their programs materially.

Standard 4

Quality may be indicated in colleges whose students do extensive reading and, specifically, a great deal of general reading on their own initiative.

While this standard would appear to be self-evident, its point might be driven home were colleges to give more study to the circulation records in their libraries. Some institutions are not very successful in encouraging their students to read. Records at most institutions show the average number of books checked out from their college libraries per year, and faculties would do well to study these reports. Many institutions also have established supplementary reading centers in student living quarters. Furthermore, the advent of inexpensive paperbacks of high caliber has contributed to the feasibility of students developing their own collections.[6]

Standard 5

Quality may be indicated in colleges whose students average 30 to 45 clock hours per week in out-of-class study.

While this standard has no bearing on the quality of the study done, it does indicate whether students have a serious purpose and a

[6] Indeed, some colleges use a special fund to keep student centers stocked with paperbacks, on the theory that the cost of unreturned books may be a valuable contribution to student learning resources.

disposition to resist leveling influences, two characteristics of highly productive colleges. In summary, it says a good deal about the climate of the college. It also provides a measure of the kind of teaching done because studies[7] show that some teachers are more successful in getting their students to increase the time devoted to study than are others.

The position of the student along the acquiry-inquiry axis (items 1 and 2, section III) is also indicated by such data because if students are not studying much they are not learning as much as they might. What the student is learning, or how well he is learning it, is, of course, not indicated by these figures because they deal only with hours.

The expectancy of some institutions is that, for every hour of credit given in a course, the student will spend 3 hours per week in out-of-class study. Other institutions expect only 2 hours of out-of-class study for each class hour. For a 15-credit-hour load, this would mean 45 hours per week in the first instance, 30 in the second. In a questionnaire circulated among student body presidents and other student body leaders (all of whom were upperclassmen), the mean number of hours spent in class preparation was 28.[8] The range was from 6 to 50 hours. Ten hours or fewer per week were spent in out-of-class study by three percent of those questioned. Forty hours or more per week were spent by 17 percent.

In another study—one dealing with college seniors, all of whom were good students and had made definite plans for graduate study—the mean number of hours spent in out-of-class study was 26 per week.[9] The range was from 5 to 40 hours per week. Ten hours or fewer were spent in such study by 5 percent of the students and 40 hours per week were spent by 14 percent.

The average amount of time spent in class preparation by the upperclassmen in these two studies—superior individuals in both instances, and better-than-average students in at least the second instance—was, then, 28 and 26 hours. For freshmen and sophomores, and for the average students, the time spent in out-of-class study may be considerably less.

Still another study shows that the students in an upperclass dormitory spent 33 hours per week in out-of-class study, those in a freshman dormitory 27 hours, and those in a fraternity 18 hours.[10]

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[7] René N. Ballard, "The Study Activity of Students," *Improving College and University Teaching*, Vol. IX, No. 1, Spring 1961, p. 64–66.

[8] Data reported in a poll of student body presidents at the Convocation of the National Student Association, held in Urbana, Illinois, in 1960.

[9] Unpublished data reported to the author.

[10] Ballard, op. cit.

Standard 6

Quality may be indicated in colleges that are most successful in involving their students in independent study.[11]

Better than any other current phrase, "independent study" suggests the active involvement of students. Used in this sense and carrying this connotation, it derives its support in large part from the "acquiry" literature (see item 1, section III). But "inquiry" is a more precise term. It suggests the quality that should be sought in independent study. It emphasizes the examination of information rather than its acquisition and suggests the considerable involvement of the teacher. Inquiry includes honors, independent study (of the Ford-supported utilization variety), and some other forms of teaching techniques, such as problem-oriented and guided discovery. The emphasis upon student inquiry in honors and independent study programs and in virtually every experimental college reinforces this choice of a term. On the mistaken belief that independent study or inquiry is an end in itself, it is managed poorly on many campuses. It is managed well at only a relatively few colleges. It is done well when:

a. It is begun in the freshman year.
b. The inquiries of the students deal with significant issues, problems, or principles.
c. Critical methods of instruction and of study are used throughout the course.
d. The college offers many such courses.
e. The faculty's scholarship is equal to the very considerable requirements placed upon it by such study.

The principles of learning involved in independent study and a measure of their application are: (1) the degree to which "the range of individual differences [are] . . . accommodated," (2) the degree to which the "thinking, feeling, or doing" is that of the learner, and (3) the degree to which "the learner continues [his] learning beyond the time when a teacher is available." [12] It takes a good faculty to

[11] For colleges in which there are such programs see: Seymour Harris, *ed.*, "Higher Education in the United States, The Economic Problems," *The Review of Economics and Statistics, Supplement.* August 1960, Vol. XLII, No. 3, Part 2.

Elizabeth Paschal, *Encouraging the Excellent.* New York: Fund for the Advancement of Education, Higher Education.

Winslow R. Hatch, *The Experimental College,* New Dimensions in Higher Education, No. 3, Washington: U.S. Government Printing Office, 1960, 13 p.

Robert H. Bonthius, et al. *The Independent Study Program in the United States.* New York: Columbia University Press, 1957.

Winslow R. Hatch and Ann Bennet, *Independent Study,* New Dimensions in Higher Education, No. 1, Washington: U.S. Government Printing Office, 1960.

[12] Ralph W. Tyler, "Conducting Classes to Optimize Learning," a paper published in *Achieve Learning Objectives* (a report of the Summer Institute on Effective Teaching for Young Engineering Teachers, Aug. 28–Sept. 9, 1960). University Park, Pa.: The Pennsylvania State University, 1960.

recognize the need for independent study and a better one to involve students significantly in such study.

The case for independent study or inquiry is summed up nicely in the following quotation:

> A . . . condition that makes for better learning in higher education is definite provision for independent study. There is reason to believe that the assumption by the student of more responsibility for his education increases the likelihood that he will continue his education on his own after graduation. The notion that learning can take place only in formal courses has plagued American education. This is now being overcome and "spoon-feeding" is more and more being viewed as bad education. The textbook-lecture pattern of teaching usually leads to emphasis on acquiring information to the neglect of clarifying *ideas*. There is ample evidence that ideas, once thoroughly understood, become a permanent part of the student, whereas information unrelated to ideas in the mind of the student is mostly forgotten in a few months. Both information and ideas—and, it might be added, skills—are important in education. A wider use of independent study plans in which the student is expected to dig out knowledge for himself, probably from original sources, instead of relying on lectures or textbooks, would enhance the quality of higher education.[13]

An institution indicates its competence in independent study or inquiry to the extent that it practices what it preaches most—namely, provides active learning, discovery, or inquiry—and where the student makes substantial investment in acquiry. An important byproduct or consequence is that the teachers of such students do not need to waste their time purveying information but can reinforce, extend, and examine the information acquired by their students.

Standard 7

Quality may be indicated in colleges which, in conjunction with independent study or inquiry, offer common or core curriculums as bases for common understandings.

One of the reasons why independent study has not realized some of its potential "plus" values is that it has not had a solid curricular context. As a consequence, there is little reinforcement from course to course. In effect, the college does not throw its curricular weight behind the effort.

Besides providing for better communication between students and teachers, thereby developing a sense of intellectual community, a common curriculum can also advance a "common spirit of inquiry." [14]

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[13] Manning M. Pattillo, Jr., "A Foundation Looks at Higher Education," *Special Reports*, Circular No. 563, Office of Education, OE–50028, Washington: U.S. Government Printing Office, March 1959, p. 54.

[14] *Monteith College, Wayne State University Bulletin*, 1960–61, p. 6.

"Common understandings" is the phrase used to describe these purposes on many other campuses. Such understandings are achieved by bringing together courses and teachers that have heretofore been kept apart in the student's mind.[15] Where methodological concerns and value quests are mutual, where common principles, intellectual skills, and a scientific emphasis are the cement, the result is more likely to be consolidation, greater unification, and a common outlook.[16]

John E. Rodes, reporting on Occidental College's 11 years' experience with a prescribed and integrated History of Civilization program, observes: "It draws the freshman and sophomore classes together in a common learning situation which has greatly added to student morale." [17]

Another college observes that elective offerings were originally so scattered that students were insufficiently prepared for graduate study in either general or specialized knowledge.[18] The counter provision is a curriculum required of all students for the first 3 years in which the students' general education and basic knowledge of their specialization (science, social sciences, and humanities) are intensified and cohesive.[19]

Regardless of the extent of common learning situations, it is generally agreed that programs in which inquiry is a stated or an implied purpose are likely to be successful to the degree faculties involved have a sophisticated understanding of the problems and a commitment to the program.

Standard 8

Quality may be indicated in colleges whose introductory courses or programs reflect a discriminating scholarship and also exploit uniqueness, the point being to make them sufficiently above high school courses in method and content to challenge students.

It is positive motivation for students to explore something new.[20] However, Tyler tells us that only as each new practice requires the

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[15] *The Social Sciences in the Liberal Arts College,* a report of the study on General Education in the Social Sciences at Pomona College, Claremont, California, August 1957. (Unpublished.)

[16] Report on the *Program for Utilization of College Teaching Resources,* conducted at Lehigh University, 1956–57. (Unpublished.)

[17] "Integrated General Education Course in History of Civilization, Occidental College," *Special Reports,* Circular No. 563, Office of Education, OE–50028. Washington: U.S. Government Printing Office, March 1959, p. 29.

[18] *The Ithaca Plan,* Ithaca College, 1960.

[19] Ibid.

[20] Robert M. Gagné, "Principles of Learning," a paper published in *Achieve Learning Objectives* (a report of the Summer Institute on Effective Teaching for Young Engineering Teachers, Aug. 28–Sept. 9, 1960), University Park, Pa.: The Pennsylvania State University, 1960, p. B–54.

student "to give attention to it because of new elements in it does it serve adequately as a basis for effective learning." [21] Newness thus becomes a criterion of good teaching and learning.

At Antioch College, it was discovered that the independent study program met with exceptional success when offered to freshmen. Expecting something different from what they had known in high school, the students not only accepted the independent study program but also made it one of the most successful programs of its kind.

Not all institutions provide for the fact that something substantial and challenging should be done for the aspirations of the student and the college. This is borne out by the results of a comprehensive study on the withdrawal of college students.[22] Forty-eight percent of the men and 33 percent of the women respondents who had withdrawn noted as a reason for withdrawal a lack of interest in their studies.[23]

Standard 9

Quality may be indicated in colleges that have "high but attainable aspirations." [24]

For both student and college, high aspirations are necessary. This is a point emphaized by Gagné, Tyler, and McKeachie.

One way in which an institution may dramatize its aspirations for its students—aspirations that are high but attainable—is to exploit the *master-teacher* approach. In Hofstra's New College, this approach is being tested. The master-teacher is central in Washington University's (St. Louis) vision of the university, and has been an important consideration in the staffing of Wayne State University's Monteith College, Michigan State's Oakland University, and Delta College at Saginaw, Michigan.

Standard 10

Quality may be indicated in colleges that are able to demonstrate that they do, in fact, develop the critical faculties of their students.

This standard is derived from the research done on learning and on the characteristics of students and of institutions associated with

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[21] Ralph W. Tyler, op. cit., p. C–11.

[22] Robert E. Iffert, *Retention and Withdrawal of College Students*, U.S. Office of Education, Bulletin No. 1, 1958. Washington: U.S. Government Printing Office, 1957, 177 p. Study was based on a sample consisting of approximately 13,000 unmarried nonveteran students who entered college in the fall of 1950.

[23] Ibid.

[24] Ralph W. Tyler, op. cit., p. C–11 and 12.

"high productivity." The criterion can be approached directly and without an elaborate defense because every college proposes to teach its students how to think. While many institutions make this claim, few can prove it. Fewer still have attempted to discover how *much* they improve student thinking. Since instruments are available that test this achievement, an institution that attaches importance to it can provide itself with this information. For a discussion of the techniques that may be used, one could profitably read *General Education—Explorations in Evaluation* [25] and "Teaching for the Development of Thinking Abilities and Habits." [26]

Standard 11

Quality may be indicated in the college whose seniors tend to be more creative than they were as freshmen.

This standard is based on the research done on the characteristics of highly productive colleges and student bodies, and the substantial body of creativity literature.[27] That seniors are inclined to be more creative than freshmen cannot be assumed; certain studies indicate that some students become less creative and more conforming as a consequence of their college experience.

Of this problem, Cartier has this to say:

> While we know little about the "disease" (creativity), we do know something about the "antidote." Our society possesses a great variety of antidotes for this marvelous "disease," and applies them in huge doses at the first symptom. They consist of various combinations of pressures toward conformity, fear of failure, fear of the unknown, fear of being scoffed at, disillusionments and delusions, the constant harping (in very subtle ways) on adjustment. This adjustment is too often adjustment to the world as it exists now—a very imperfect world. Adjustment to it and passive acceptance of it, therefore, constitute a denial of every individual's right and responsibility to see the wrongs in it and rebel against them.
>
> We have often heard that the majority must rule. We teach our children this when they are too young to know the meaning of it. Each child lives in a very small and often closed society which is a tiny minority of mankind. The only majority *he* sees is inside that circumscribed group, which may well be wrong. In fact, the odds are almost overwhelming that it will be. But we teach him to adjust—blindly. I mean we teach

[25] Paul Dressell and Lewis Mayhew. *General Education—Explorations in Evaluation*. Washington, D.C.: American Council on Education, 1954.

[26] John W. Hollenbach, "Teaching for the Development of Thinking Abilities and Habits—A Faculty Self-Study, Hope College," *Case Book, Education Beyond the High School*, Case No. 35, Office of Education, Washington: U.S. Department of Health, Education and Welfare, Vol. 1, June 1958.

[27] For a partial bibliography, see Mervin B. Freedman, *Impact of College*, New Dimensions in Higher Education, No. 4, Washington: U.S. Government Printing Office, 1960, p. 24–27.

> him blindly, to adjust blindly—not to strike out, not to fight, not to differ, not to question—in short, not to think creatively. . . . there are a thousand varieties of ways to teach people *not* to think creatively, and . . . we use them constantly in every grade from kindergarten through the graduate schools with terrible effectiveness. We can learn to recognize these things we do to kill a student's creativity and stop doing *some* of them.[28]

Standard 12

Quality may be indicated in a college that has a significant impact on its students.

Since a college can determine, within limits, what its impact is, it can no longer ignore this responsibility. Even at Vassar College, which has made extensive impact studies of its students, it has been demonstrated that, "except for a minority . . . the academic and intellectual aims [of the college] do not enter primarily into the formation of the central values and habits of life of the student body."[29] The Vassar study also indicates that the faculty has little impact on the thinking of students and that the student culture has a greater effect, but that its effect is generally a leveling one. Institutions in general might well ask themselves how much they know about their impact upon students and what they are doing about it.

Standard 13

Quality may be indicated in colleges that are deliberately permissive and flexible.

To be effective, permissiveness and flexibility should be deliberately purposeful in order to enhance student development. Actually, this standard concerns avoidance of enforced conformity or stereotypy. As to permissiveness, Lazarfeld is reported to have found it in the:

> . . . teacher's willingness to permit unorthodox, unpopular ideas and ideologies to get a hearing on the campus. . . .
>
> The most permissive professors are also those most politically liberal in a broader sense. They give most attention in their teaching to a progressive educational philosophy, one which stresses the value of imbuing students with a desire for social creativeness, by emphasizing problem areas and controversial issues rather than established facts and accepted knowledge. . . .

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[28] Francis A. Cartier, Educational Division, Air Force ROTC, Maxwell Air Force Base, Alabama. A letter to the author, November 1960.

[29] Nevitt Sanford, "Impact of a Woman's College on Its Students," *Special Reports*, Circular No. 563, Office of Education, OE–50028. Washington: U.S. Government Printing Office, March 1959, p. 44.

> The schools of highest quality are also those which have the most clearly formulated policy on matters of academic freedom; their faculties have a much more powerful voice in helping to set this policy, and their administrative officials are considered much more ready and able to come to the aid of a teacher under attack.[30]

Pattillo's conclusion is that "informality in personal relationships, especially between teachers and students, is associated with academic achievement . . . [in] colleges and universities that have produced far more than their share of the educated leadership of the United States." [31]

Cole and Lewis cite numerous types of flexibility. For example, advanced placement, at least in the case of Harvard University, gives leisure to the student in his fourth year to do whatever he wishes—to attend courses, to take an additional senior tutorial, *to read on his own*, or to take graduate work.[32] Also cited by Cole and Lewis are Harvard's course reduction to permit more independent study or inquiry; Reed College's senior thesis for those who pass a special qualifying exam in their junior year; tutorial plans such as those at the University of Michigan, the University of Chicago, and Harvard; special courses for special students at the California Institute of Technology, San Francisco State College, Hiram College, University of Michigan, Oberlin College, University of Chicago, Massachusetts Institute of Technology, and Stanford University; and four kinds of special or honors programs at Yale University: the "scholars of the house" plan, small seminars for honors candidates in their major fields of study, sophomore seminars in the residential colleges (which may be taken in lieu of a regular lecture class), and the directed studies program of general education (which is limited to the top quarter of the student body). All provide flexibility and an opportunity for independent study or inquiry. Special devices available for upperclassmen, such as Stanford's senior colloquia, Reed's senior symposium, and the University of Chicago's preceptorials in some third-year courses, are other ways in which the purposes of independent study or inquiry are met. For other aspects of flexibility, see *Advanced Standing* [33] and *The Credit System in Colleges and Universities.*[34]

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[30] Richard Herpers, "Academic Freedom During 'The Trying Years,'" *Special Reports*, Circular No. 563, Office of Education, OE–50028. Washington: U.S. Government Printing Office, March 1959, p. 57–58.

[31] Pattillo, op. cit., p. 54.

[32] Charles C. Cole, Jr., and Lanora G. Lewis, *Flexibility in the Undergraduate Curriculum*, New Dimensions in Higher Education, No. 10, 1962, 57 p.

[33] Shirley A. Radcliffe, *Advanced Standing*, New Dimensions in Higher Education, No. 8, Washington: U.S. Government Printing Office, 1961, 24 p.

[34] Lanora G. Lewis, *The Credit System in Colleges and Universities*, New Dimensions in Higher Education, No. 9, Washington: U.S. Government Printing Office, 1961, 37 p.

Standard 14

Quality may be indicated in colleges that are experimental.[35]

The experimental nature of colleges appears to be a good indicator of quality because only competent faculties are apparently disposed to experiment. They may be the only ones that dare to experiment.

While reports of such experimentation and achievements may be impressive, no institution or group of institutions and no agency or organization has grounds to be complacent about what it has done to improve the quality of undergraduate education. A review of experimentation in connection with a current study indicates:

a. That quality and experimentation support each other—quality leads to experimentation, and experimentation may enhance quality.

b. That the most experimental institutions are those that also place high in studies of the undergraduate origins of American scholars.

c. That more experimentation is being done by institutions with established reputations than by those which have less to risk.

d. That more experimentation is being done by private than by public institutions.

There is support also from the literature on learning. Gagné refers, for example, to the place of the experimental habit and competence in optimal learning situations.[36] While Pattillo uses a little different language, he, too, is impressed by the significance of experimentation. "The good institution constantly gathers evidence on the impact of its program on its students. Closely allied with this critical attitude is a willingness to experiment with promising new approaches. . . ." [37]

Standard 15

Quality may be indicated in colleges that jealously defend the principles of academic freedom.

We have been told that ". . . the best schools, with their highly permissive faculties, were those most vulnerable to attack in the postwar decade." [38] One form of attack was to insist upon an oath of allegiance from teachers that was not required of other citizens. To many, this was considered an encroachment upon academic freedom. The colleges that typically challenge imposed loyalties are institutions whose faculties stand for no abridgment of their freedom and whose administrators are both willing and able to defend faculty rights to independence of thought and expression.

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[35] For such colleges see: Winslow R. Hatch, *The Experimental College*, op. cit.
[36] Gagné, op. cit.
[37] Pattillo, op. cit., p. 54.
[38] Herpers, op. cit., p. 8.

Standard 16

Quality may be indicated in colleges where effective teaching is highly regarded and adequately compensated.

Where good teaching is insisted upon—and is not just given lip service—one gets good teaching. Where it is insisted upon, it should be recognized and adequately compensated. Whether one deals with institutions ranked high in the production of scientists and other scholars,[39] or with those recognized for some other indication of quality,[40] he discovers that teachers are honored for their teaching and that their scholarship is not viewed as an end but as a means to better teaching.

If an institution pays teachers well for their teaching, great dividends may be realized from the quality of instruction. Raw statistics on compensation *en masse* may be highly important in relation to the economic status of the professional,[41] but averages derived from them may be highly misleading. In the compensation of teachers the problem is not so much that some institutions have the money and some do not. It is rather that some spend their money one way and others another.

Standard 17

Quality may be indicated in colleges whose graduates go into teaching in unusually large numbers.

This index is suggested because, where the teaching is good, students are more predisposed to enter teaching than where the teaching is mechanical and uninspired. For example, honors programs are reported to be particularly attractive to potential teachers. Behind the records made by some institutions in attracting students to teaching, there typically stand cadres of exceptionally able and committed teachers.[42]

The most frequently given reason for not recognizing and rewarding good teaching is that it is difficult to identify. Difficult it is, but not impossible. That it is worth the effort is indicated by the obser-

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[39] See Baccalaureate Origins references, section III.

[40] See references in section III, especially those on Characteristics of Institutions.

[41] "The Economic Status of the Profession, 1959–60: Annual Report by Committee Z," *AAUP Bulletin*, Summer, 1960.

[42] Frank Kille, *The Undergraduate Origins of College Teachers*. Carleton College and the State University of New York, 1958; and Allan O. Pfnister, *The Baccalaureate Origins of American College Teachers*. Washington: Association of American Colleges, 1961. See also Lanora G. Lewis, J Ned Bryan, and Robert Poppendieck, *Talent and Tomorrow's Teachers—The Honors Approach*. Number 11 of the New Dimensions in Higher Education Series. Washington: U.S. Government Printing Office, 1963.

vation that, were this one thing done, we might be able to tone down the elaborate and expensive programs currently being discussed that are designed to improve the recruitment, placement, and inservice training of teachers. The basis for this opinion is that, if an institution recognizes and rewards good teaching, it gets good teaching and enough good teachers.

Standard 18

Quality may be indicated in colleges that place highest in a composite of the "origin" studies.

Wisdom is found in the composite of studies dealing with the undergraduate origins of American scholars, scientists, teachers, and graduate students and in the setting provided by the quality literature, much of which is discussed in this publication. Some of the better known titles in the literature on baccalaureate origins are listed in the next section.

Standard 19

Quality may be indicated in colleges where opportunities for study abroad are carefully planned and implemented.

Such programs [43] are characterized by the following attributes:

a. The study is planned for at least a year in advance, preferably in the freshman year and ideally at the student's initial registration. The planning should reflect at least in principle the pooled experience of American colleges.

b. The students selected are required to *demonstrate* satisfactorily (by tests and prior performance) independence, critical facility, tolerance, sensitivity, responsibility, and a nonstereotyped approach to learning.

c. The students selected are required to demonstrate (by tests, papers, or other critical or creative efforts) a level of ability which will permit them to perform creditably, particularly in those countries where they will be compared with highly selected university students.

d. The purposes of the program are stated explicitly, and the performance of the student is evaluated in terms of its specific objectives.

e. Credit, if given, is never in excess of that given by the strongest colleges and those with the longest experience in study abroad programs. The amount may sometimes be objectively determined by having the student successfully "challenge" courses or elements of courses offered for credit on the home campus or by other fully accredited institutions.

The above attributes would seem to apply also to study undertaken at a foreign university in courses for its nationals and in special programs designed for American students. The attributes would also

[43] See "Study Abroad" references in section III.

appear relevant to programs regardless of whether their purpose is specialized or general or whether it is simply immersion in a foreign culture.

Standard 20

Quality may be indicated in colleges whose "institutional" research is done on important things, and not merely on problems that are useful or interesting.

In making this observation one need make no distinction between those institutions with bureaus of institutional research or research committees, and those where the research is done in the departments in a quite uncoordinated fashion. Whether a lot of research is done or very little, it can be either significant or trivial. Some institutions, like some people, have a talent for doing important research, while others seem to lack the insight. Despite commendable industry and technical competency, they miss the primary targets. The role of institutional researchers, then, may well be not only to answer questions but also to ask them. The function of researchers—were sufficient attention attached to importance—might well be continually to bedevil the administration and faculty by asking some of the right questions. Certainly, researchers can remind and keep reminding colleagues that priorities must be established in planning, that the resources of the institution are limited, and that priorities must be reexamined constantly.

Standard 21

Quality may be indicated in colleges whose counseling program is so managed that the counselors have an impact on the total institution—and not upon just those students with whom they counsel.

To play this role, counselors have to be thoroughly cognizant of trends and developments in higher education. Not only must they be able to identify characteristics of students; they must also have a working knowledge of the characteristics of institutions and see the interrelationships between student characteristics and institutional characteristics. They must be familiar with research on learning theory and with methods involved in measuring not only academic achievement but college impact as well. Furthermore, the counselor's background in psychology and sociology should be such that he can work with the administration and faculty in analyzing the needs of students, planning effective programs to meet those needs, and evaluating results.

III. Literature of Quality

THE LITERATURE from which the 21 standards of quality were distilled falls logically into the following seven categories, each of which is discussed below:

1. "Acquiry"
2. "Inquiry"
3. Learning and Teaching Theory and Practices
4. Characteristics of Students
5. Characteristics of Institutions
6. Baccalaureate Origins
7. Study Abroad

"Acquiry"

By "acquiry" is meant that process of learning and teaching in which the primary emphasis is upon the acquisition of information rather than upon its examination. The two are, of course, usually mixed; but where the major achievement is acquisition, the process is described as "acquiry."[1] For the nature of the experimentation done and for the conclusions that may be drawn from it, examples are illustrative:

In research done on teaching effectiveness at the University of Michigan, it was discovered that in the simple acquisition of facts students did as well, if not better, without the personal intercession of teachers than they did with it; that teachers may actually distract students in this instance.[2] It was even discovered that students studying by correspondence mastered content at least as well as, and perhaps a little better than, resident students.

Pfnister reports in his "Review of Research on Class Size" that, when certain English classes were reduced from 5 to 3 hours a week, and when certain social science classes were treated in the same man-

[1] For a discussion of this subject see Winslow R. Hatch and Ann Bennet, *Independent Study*, New Dimensions in Higher Education, No. 1, Washington: U.S. Government Printing Office, 1960, p. 12–20.

[2] Thomas S. Parsons, Warren A. Ketcham, and Leslie R. Beach, "Effects of Varying Degrees of Student Interaction and Student-Teacher Contact in College Courses." Ann Arbor, Mich.: School of Education, University of Michigan, 1958, 56 p. (Processed).

ner, the average achievements of the students were at least as high under the new as under the old arrangement.[3]

After reviewing the research done, whether under the name of independent study, teaching effectiveness, or learning, Pfnister concluded that, if we are willing to agree that the proper criterion of student achievement is command of a certain content, contact hours between student and instructor may be slashed drastically without any apparently bad effect upon the amount of learning.[4]

Pfnister also reports that in another experiment seven 10-minute conferences during a semester resulted in better student achievement than did regular group class sessions.[5]

In general, the results of research on independent study programs indicate that students in these programs learn at least as much as those engaged in regular class work.[6] The implications in this research are that neither teachers nor the colleges that employ them can afford to "instruct," that is, to simply provide information. They must "teach." They must do more than instruct. They must examine the information taught or acquired. They must make their teaching and their students' learning a form of inquiry. From this, we can only conclude that the more one teaches and the less one instructs, the better it is likely to be for both the teacher and the taught. It is better for the teacher because, if he instructs, he is vulnerable and expendable. Books, teaching machines, teaching tapes, and television sets, all of which can be mass-produced, can be used to instruct.

In de-emphasizing the role of "informing" in teaching, Gagné maintains that what the teacher can do best is to know enough not to try to inform.[7]

"Inquiry"

By inquiry is meant that process of learning and of teaching in which information is examined. It is that which is done after information has been provided or learned; it is the reason for acquiry. Inquiry is the essence of honors, of independent study—properly understood and practiced—and of problem-oriented instruction.

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[3] Allan O. Pfnister, "Review of Research on Class Size." An address given at the Annual Conference on Higher Education in Michigan, University of Michigan, November 17–18, 1959.

[4] Ibid.

[5] Ibid.

[6] Winslow R. Hatch and Ann Bennet, *Independent Study*, op. cit.

[7] Robert M. Gagné, "Principles of Learning," a paper published in *Achieve Learning Objectives* (a report of the Summer Institute on Effective Teaching for Young Engineering Teachers, August 28–September 9, 1960), University Park, Pa.: The Pennsylvania State University, 1960.

Reports on this subject appear in the following literature:

Baskin, Samuel. *Quest for Quality*, New Dimensions in Higher Education, No. 7. Washington: U.S. Government Printing Office, 1961, 18 p.

Fund for the Advancement of Education. *Better Utilization of College Teaching Resources.* New York: Fund for the Advancement of Education, May 1959, 63 p.

Hatch, Winslow R., and Ann Bennett. *Independent Study*, New Dimensions in Higher Education, No. 1. Washington: U.S. Government Printing Office, 1960, 36 p.

The conclusions drawn from these reports are as follows: A distinction should be made between "instructing" and "teaching." The necessity of making this distinction is the demonstration that in the act of acquiring information the actual presence of a teacher is not necessary and may not be desirable; that individual students can "instruct" themselves (independent study) and apparently do this quite effectively. If "informers" or "instructors" have to be drafted to manage acquiry, such as a librarian or a technician in a learning resources center, they can be drawn from the ranks of those who are most adept at purveying information. Teachers may need to assemble and prepare such materials as books, films, and tapes; they may occasionally make televised and other presentations, transcribe their lectures, and "program" some of their materials. But they should not curtail—or be permitted to curtail—the amount of time they have for "teaching." They should free themselves to teach.

Learning and Teaching Theory and Practices

In the literature on learning theory and the conditions of learning, the problem is to get at the essence of what is appearing in a voluminous literature and to find a consensus as to what this essence is. Such a consensus is not easily achieved, but there is impressive agreement based on papers presented by Gagné, Tyler, and McKeachie at the Summer Institute on Effective Teaching for Young Engineering Teachers.[8] These papers were prepared independently, under quite different titles, but they present essentially the same points. They are recommended for their conciseness and the creditability of the witnesses involved. Of the observations made by these authors, those relevant to this publication are:

1. That learning is good and hence becomes a criterion of quality when it is "active" rather than "passive" (McKeachie); when it reflects that which "the learner learns," that which "he is thinking, feeling, or doing" (Tyler);

[8] *Achieve Learning Objectives*, a report of the Summer Institute on Effective Teaching for Young Engineering Teachers, Aug. 28–Sept. 9, 1960. University Park, Pa.: The Pennsylvania State University, 1960.

when "the central part of education as a system [is] . . . the *human learner*" (Gagné).

2. That it is positive motivation for students to explore something *new* (Gagné). Only as each *new* practice requires the student "to give attention to it because of *new* elements in it does it serve adequately as a basis for effective learning" (Tyler). In sum, newness may be a criterion of good teaching and learning.
3. That "levels of aspiration [are] . . . important" (Gagné). The "learner [must] set high standards of performance for himself . . . high but attainable" (Tyler). "We can teach students to enjoy learning" (McKeachie).
4. That the endorsement of "guided discovery" (Gagné), of "problem solving" (Tyler), and of "problem-oriented approaches" (McKeachie), provides another criterion of quality. The word used to describe this type of learning in honors programs, in independent study, and in the newer experimental colleges, is *inquiry;* and this is the term used in this publication to describe the several manifestations of this phenomenon.

Treatments of learning and teaching practices have been scattered throughout the New Dimensions series and will be treated in more detail in forthcoming issues.

Characteristics of Students

While the research on this subject has been very considerable during the last 4 or 5 years, two centers have distinguished themselves: the Center for the Study of Higher Education at the University of California at Berkeley and the Mary Conover Mellon Foundation's program at Vassar College. Listed below are reports from these centers.

CENTER FOR THE STUDY OF HIGHER EDUCATION

CLARK, BURTON R., "College Image and Student Selection," *Selection and Educational Differentiation.* Berkeley, Calif.: Center for the Study of Higher Education, 1960, p. 155–168.

——— "The Influence of Organization Image on Student Selection," Berkeley, Calif.: Center for the Study of Higher Education (Processed).

——— and TROW, MARTIN, "Determinants of College Student Subculture," to be published as chapter 2 in *The Study of Peer Groups: Potential, Procedures and Proposals,* T. Newcomb and E. K. Wilson, *eds.* Forthcoming book for the Social Science Research Council.

HEIST, PAUL, "The Diversified Student Population of American Higher Education," paper presented at the Annual Meeting of the American Psychological Association, Washington, D.C., September 1958.

———. "Diversity in College Student Characteristics," *Journal of Educational Sociology,* Vol. 33, No. 6, February 1960, p. 279–291.

———. "Variations in the Personality Characteristics of Underachieving College Students," paper presented at the Symposium on the Underachieving College Student at the American College Personnel Association meeting, Spring 1960.

HEIST, PAUL A., MCCONNELL, T. R.; MATSLER, FRANK; and WILLIAMS, PHOEBE, "Personality and Scholarship—Distinguished Characteristics of High Ability Students Who Choose Institutions Ranked High in the Production of Future Scholars," *Science*. Vol. 133, No. 3450, February 10, 1961, p. 362–367. (Summarizes research at the Center for the Study of Higher Education.)

——— and WEBSTER, HAROLD, "Differential Characteristics of Student Bodies with Implications for Selection and Study of Undergraduates," *Selection and Educational Differentiation*. Berkeley, Calif.: Center for the Study of Higher Education, 1960, p. 91–106.

MCCONNELL, THOMAS R. "Differential Selectivity of American Higher Education," *The Coming Crisis in the Selection of Students for College Entrance*, Kenneth E. Anderson, *ed*. Washington, D.C.: American Educational Research Association, National Education Association, 1960, p. 3–9.

———. "Problems of Distributing Students Among Institutions with Varying Characteristics," *North Central Association Quarterly*, Vol. 35, January 1961, p. 226–238.

——— and HEIST, PAUL A. "The Diverse College Student Population," *The American College*, Nevitt Sanford, *ed*. New York: John Wiley & Sons, Inc., 1962, p. 225–252.

——— and ———. "Do Students Make the College?" *College and University*, Vol. 34, Summer 1959, p. 442–452.

WARREN, JONATHAN, and HEIST, PAUL A. "Personality Attributes of Gifted College Students," *Science*, Vol. 132, August 5, 1960, p. 330–337.

WEBSTER, HAROLD "The Impact of the Student on the College," *Institutional Research on College Students*, K. Wilson, *ed*. Atlanta, Ga.: Southern Regional Education Board, 1962.

———. *Personality Changes in College Students*. Berkeley, Calif.: Center for the Study of Higher Education (Processed).

——— and BENJAMIN BLOOM. "The Outcomes of College," *Review of Educational Research*, Vol. 30, October 1960, p. 321–333.

A summary of research at the Center indicates that able students at "high productivity" colleges have the following: disposition to work independently and to like it, an intellectual orientation, a liberal outlook, an experimental nonstereotyped cast of mind, sensitivity, flexibility, tolerance, a creative-artistic flair, and resistance to leveling influences and to confirmity for conformity's sake.

These studies also indicate, among other things, that students with the above characteristics tend to increase the effectiveness of a college and that faculties, hence colleges, with the same characteristics make the best use of student talent.

VASSAR-MELLON STUDY

BEREITER, CARL, and FREEDMAN, MERVIN B., "Personality Differences Among College Curricular Groups," *American Psychologist*, Vol. 15, 1960, p. 435.

FREEDMAN, MERVIN B., *Impact of College*, New Dimensions in Higher Education, No. 4, Washington: U.S. Government Printing Office, 1960, 27 p.

———. "The Passage Through College," *Journal of Social Issues*, Vol. 12, 1956, p. 13–28.

———. "Some Observations on Personality Development in College Women," *Student Medicine*, Vol. 8, February 1960, p. 228–245.

———. "What Does Research Show About the Effects of the Total Institutional Program on Student Values?" *Current Issues in Higher Education*. G. Kerry Smith, *ed.* Washington: National Education Association, 1958, p. 102–107.

SANFORD, NEVITT, *ed. The American College: A Psychological and Social Interpretation of the Higher Learning.* New York: John Wiley & Sons, Inc., 1962, 1,084 p. (Summarizes Vassar-Mellon Study literature.)

———, *ed.* "Personality Development During the College Years," *Journal of Social Issues*, Vol. 12, 1956, p. 3–72.

———, "Personality Development During the College Years," *Personnel and Guidance Journal*, Vol. 35, 1956, p. 74–80.

WEBSTER, HAROLD, "Changes in Attitudes During College," *Journal of Educational Psychology*, Vol. 49, June 1958, p. 109–117.

In a study of the values of American college students, Suchman [9] found that most of the students included in the study believed that, on the whole, colleges are doing a good job. In evaluating their education, students stressed two areas of dissatisfaction: (1) the casual development of moral capacities and values, and (2) impersonal student-teacher relationships. In this study, which included Cornell University students and a broad sample of students in 10 other major universities, it was discovered that moral capacities and values lie in a cluster of conservatism involving conformity to the social role expectations of one's group, intolerance of deviation, and conservative opinions on political and social issues. The report concludes that, with regard to student-teacher relationships and values, what is lacking are dominant new educational values characteristic of these new times.

Characteristics of Institutions

A focus for this study has been the Syracuse "approach." The list of references on this topic provided below is illustrative only and therefore not necessarily complete.

PACE, C. ROBERT, "Five College Environments," *College Board Review*, Vol. 41, Spring 1960, p. 24–28.

——— and STERN, GEORGE G. "An Approach to the Measurement of Psychological Characteristics of College Environments," *Journal of Educational Psychology*, Vol. 49, October 1958, p. 269–277.

[9] Edward A. Suchman, "The Values of American College Students," *Long-Range Planning for Education—Report of 22nd Educational Conference Sponsored by the Educational Records Bureau and the American Council on Education*, A. E. Traxler, *ed.* Washington: American Council on Education, 1958, p. 110–120.

PACE, C. ROBERT, and STERN, GEORGE G. *A Criterion Study of College Environment.* Syracuse, N.Y.: Psychological Research Center, 1958, 104 p.

STERN, GEORGE G. *Characteristics of the Intellectual Climate in College Environments.* Syracuse, N.Y.: Syracuse University, 1962, (Processed.).

———. "Congruence and Dissonance in the Ecology of College Students," *Student Medicine,* Vol. 8, 1960, p. 304–339.

———. *The Ecology of the American College Student: Varieties of Constraint in American Education.* Syracuse, N.Y.: Syracuse University, 1959 (Processed).

The following statements, drawn from the experiences of the Lilly Endowment, Inc., reflect some of the same conclusions found in the above literature:

> What, then, are the characteristics associated with quality in a college or university, regardless of its size or location or particular clientele? . . .
>
> The most obvious attribute of a good institution is its *seriousness of purpose.* The students are there to get an education; the faculty is determined that the students shall succeed in this. The main business is education, and the amenities of campus life are not permitted to interfere. . . .
>
> Secondly, we observe that the better institutions are *self-conscious about their distinctive roles* within the total enterprise of higher education. . . . A quality institution is not afraid to be different when to be different means to be better.
>
> The third ingredient of a first-class college or university, as we see it, is the *care with which it selects and retains faculty members.* . . . The responsible undergraduate college . . . will refuse to recognize the overriding importance of any *one* of the main qualifications for an educational post—sound scholarship, teaching ability, and personal integrity. It will insist on all three.
>
> . . . [another] characteristic of a quality institution is its *perpetual dissatisfaction with itself.* . . . It uses the best techniques that have been developed for appraising educational results—techniques far superior to the earlier methods of testing. The good institution constantly gathers evidence on the impact of its program on its students. Closely allied with this critical attitude is a willingness to experiment with promising new approaches. . . .
>
> . . . It appears that informality in personal relationships, especially between teachers and students, is associated with academic achievement. . . .[10]

Baccalaureate Origins

Studies of undergraduate origins of college faculties, scientists, and others who have achieved recognition as scholars shed some light on the qualities in the colleges which might contribute to high attainment by their students. Included in the baccalaureate origins literature are the following:

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[10] "A Foundation Looks at Higher Education," *Lilly Endowment, Inc.—A Report for 1957.* Indianapolis, Ind.: Lilly Endowment, Inc., p. 4–10.

ASTIN, ALEXANDER W., "A New Approach to Evaluating College 'Productivity,'" *Science*, Vol. 136, No. 3511, April 13, 1962, p. 129–135.

HOLLAND, JOHN L., "Undergraduate Origins of American Scientists." *Science*, Vol. 126, September 6, 1957, p. 433–437.

KILLE, FRANK R., *A Study of the Baccalaureate Origins of College Faculties.* Washington: Association of American Colleges, 1959, 27 p.

KNAPP, ROBERT H., and GOODRICH, HUBERT B., *Origins of the American Scientist.* Chicago: University of Chicago Press, 1952, 450 p.

KNAPP, ROBERT H., and GREENBAUM, JOSEPH J., *The Younger American Scholar: His Collegiate Origins.* Chicago: University of Chicago Press, 1953, 122 p.

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THISTLETHWAITE, DONALD L., *Social Characteristics of Universities and Colleges in Relation to Their Intellectual Output.* Evanston, Ill.: National Merit Scholarship Corporation, 1959, 14 p. (Processed.)

TRYTTEN, M. H., and HARMON, L. R., *Doctorate Production in United States Universities, 1936–1956, with Baccalaureate Origins of Doctorates in Sciences, Arts, and Humanities.* Washington: National Academy of Sciences—National Research Council, Publication 582, 1958, 155 p.

Study Abroad

A useful but partial bibliography is indicated below:

ABRAMS, IRWIN, and HATCH, W. R., *Study Abroad*, New Dimensions in Higher Education, No. 6, Washington: U.S. Government Printing Office, 1960, 21 p.

COUNCIL ON STUDENT TRAVEL, 179 Broadway, New York:

Inter-American Exchange . . . A Search for Understanding, report of Inter-American Seminar on Educational Travel Programs, 1962, 16 p.

Reports of the National Workshop on Overseas Programs for Students, 1962 (Processed): (1) "An Assessment of the Potentialities of Programs in Africa for U.S. Students," (2) "Emerging Patterns in Inter-American Exchange Programs," (3) "Next Steps in Youth Exchange with the U.S.S.R.," (4) "Evaluating the Expanding Field of International Exchange for High School Students," (5) "Developing More Effective Programs for Students Visiting the United States," and (6) "Evaluating Overseas Programs for Students."

Reports of Meeting of American Academic Program Directors in Germany and in France, 1961 (Processed).

INSTITUTE OF INTERNATIONAL EDUCATION, 800 Second Ave., New York 17, N.Y.:

Academic Programs Abroad: An Exploration of Their Assets and Liabilities, Report of a Special Conference at Mount Holyoke College, 1960, 30 p.

Programs for U.S. Undergraduates in Other Countries: A Survey of Present and Proposed Programs, 1960, 32 p.

Transplanted Students: A Report of the National Conference on Undergraduate Study Abroad, 1961, 19 p.

IV. Summary

TWENTY-ONE STANDARDS have been proposed to help answer the question, "What is quality in a college?" Quality may be indicated in those colleges—

1. That do the least "telling" and the most "teaching."
2. That make adequate provision for learning resources centers or their equivalent.
3. That provide the least remedial instruction.
4. Whose students do much general reading.
5. Whose students spend on the average more than 30 hours per week in out-of-class study.
6. That demonstrate competence in independent study, in "inquiry."
7. That, in conjunction with independent study, offer common or core curriculums.
8. Whose introductory courses clearly are above those offered in high school as to both content and method.
9. Whose aspirations are high—but attainable.
10. That can demonstrate gains in critical thinking.
11. Whose students are more creative as seniors than they were as freshmen.
12. That have a significant educational impact on students.
13. That are purposefully permissive and flexible.
14. That are deliberately experimental.
15. That jealously defend the principles of academic freedom.
16. Where effective teaching is highly regarded and adequately compensated.
17. Whose graduates go into teaching in unusually large numbers.
18. That place highest in a composite of studies showing baccalaureate origins of American scholars.
19. Where programs of study abroad are carefully planned and implemented.
20. Whose institutional research is done on important things.
21. Whose counseling program helps both the students and the institution as well.

These criteria, in turn, may become an index of student quality to the degree that students are responsive to them.

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